

Figure 1

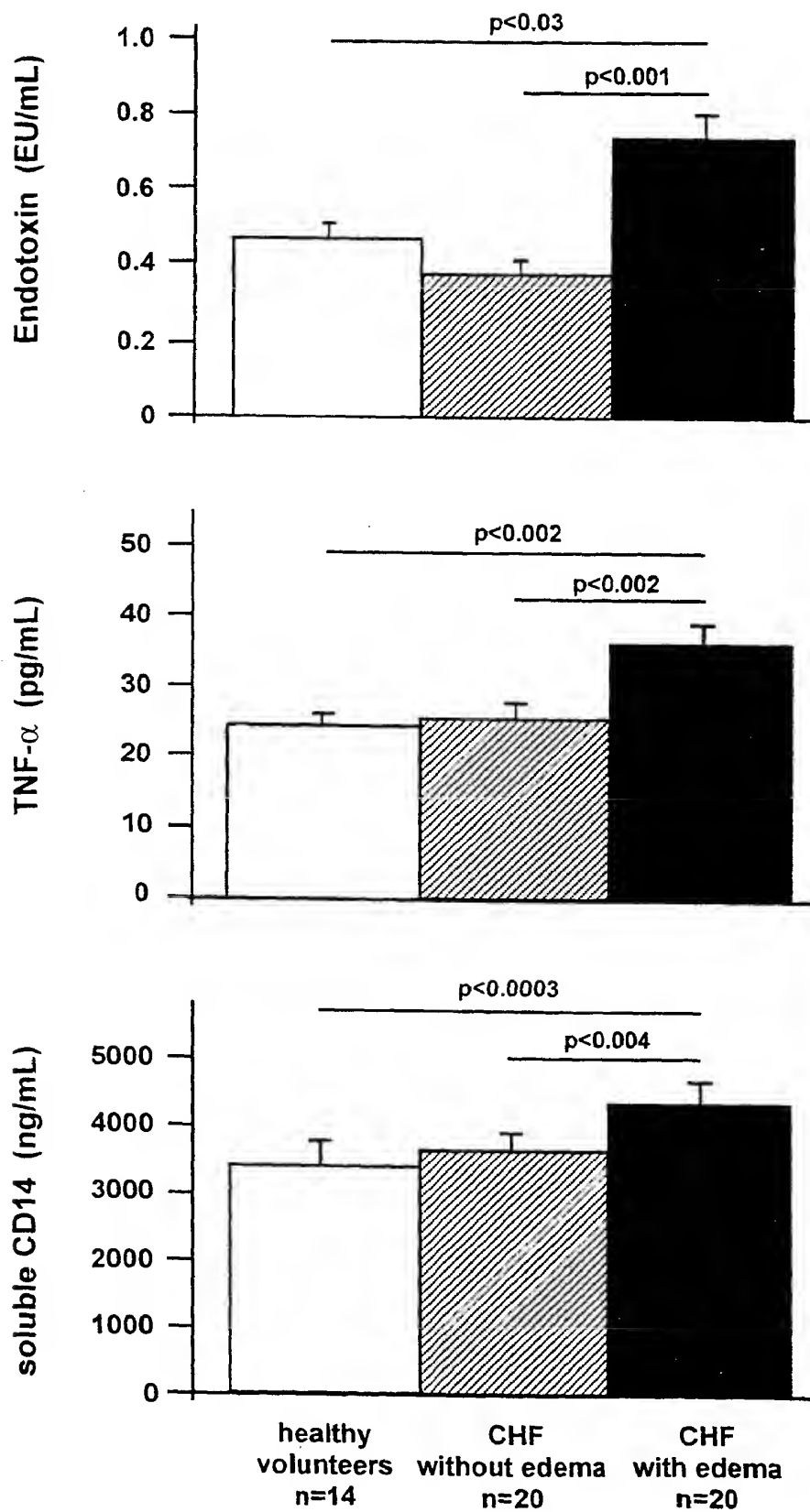
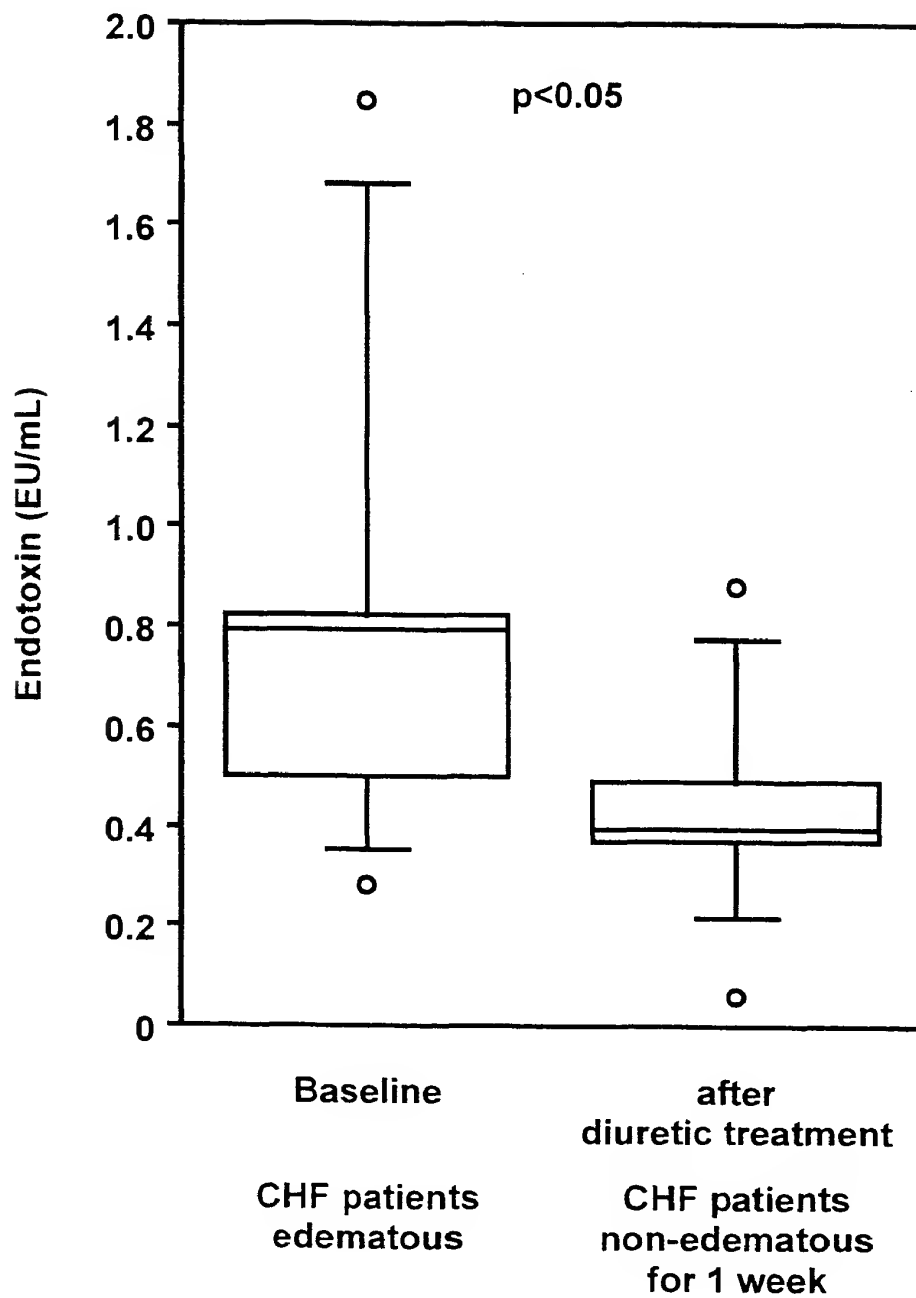


Figure 2



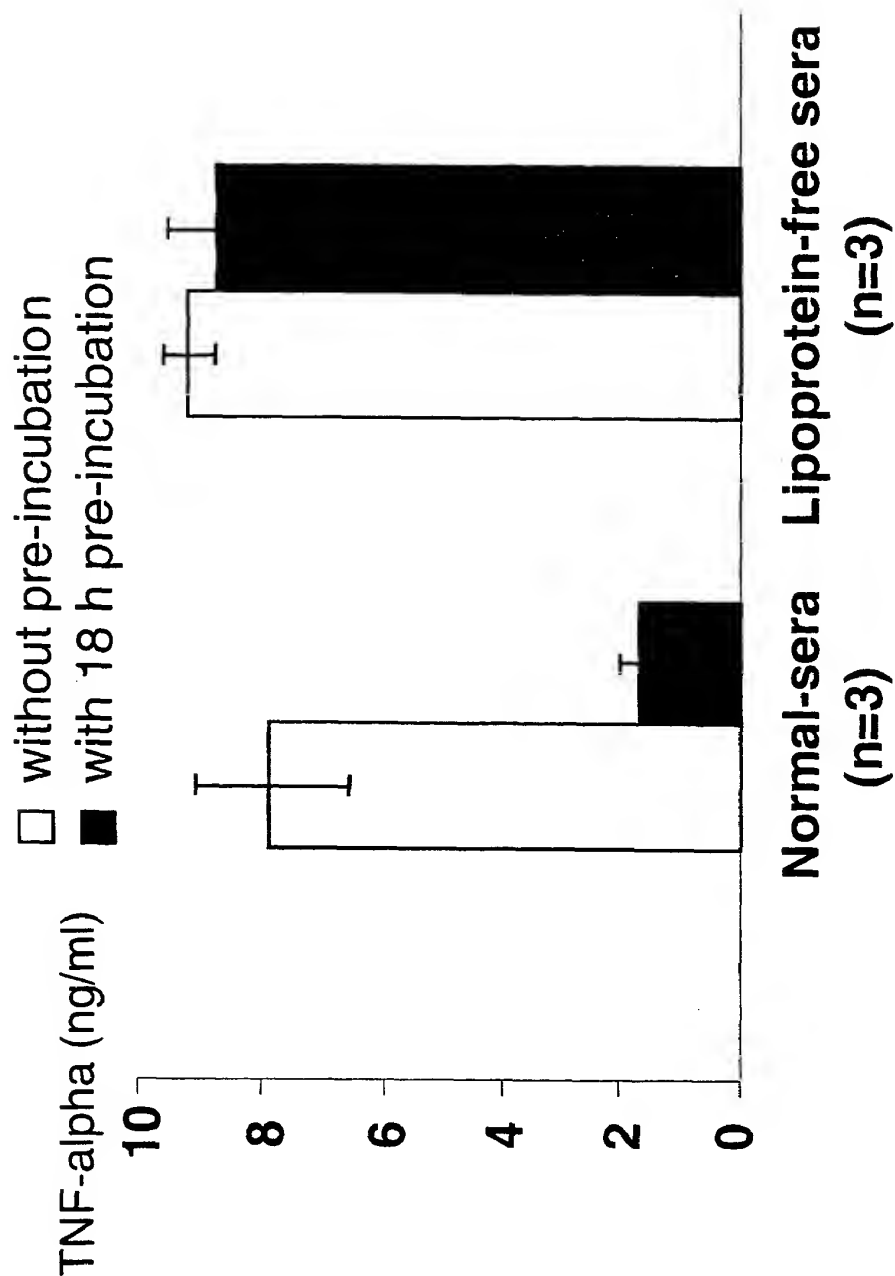


Figure 3: Lipoprotein-free serum lacks LPS-neutralizing activity

Sera were incubated with 3 ng/ml LPS and added to human monocytes directly or after a 18 h pre-incubation time

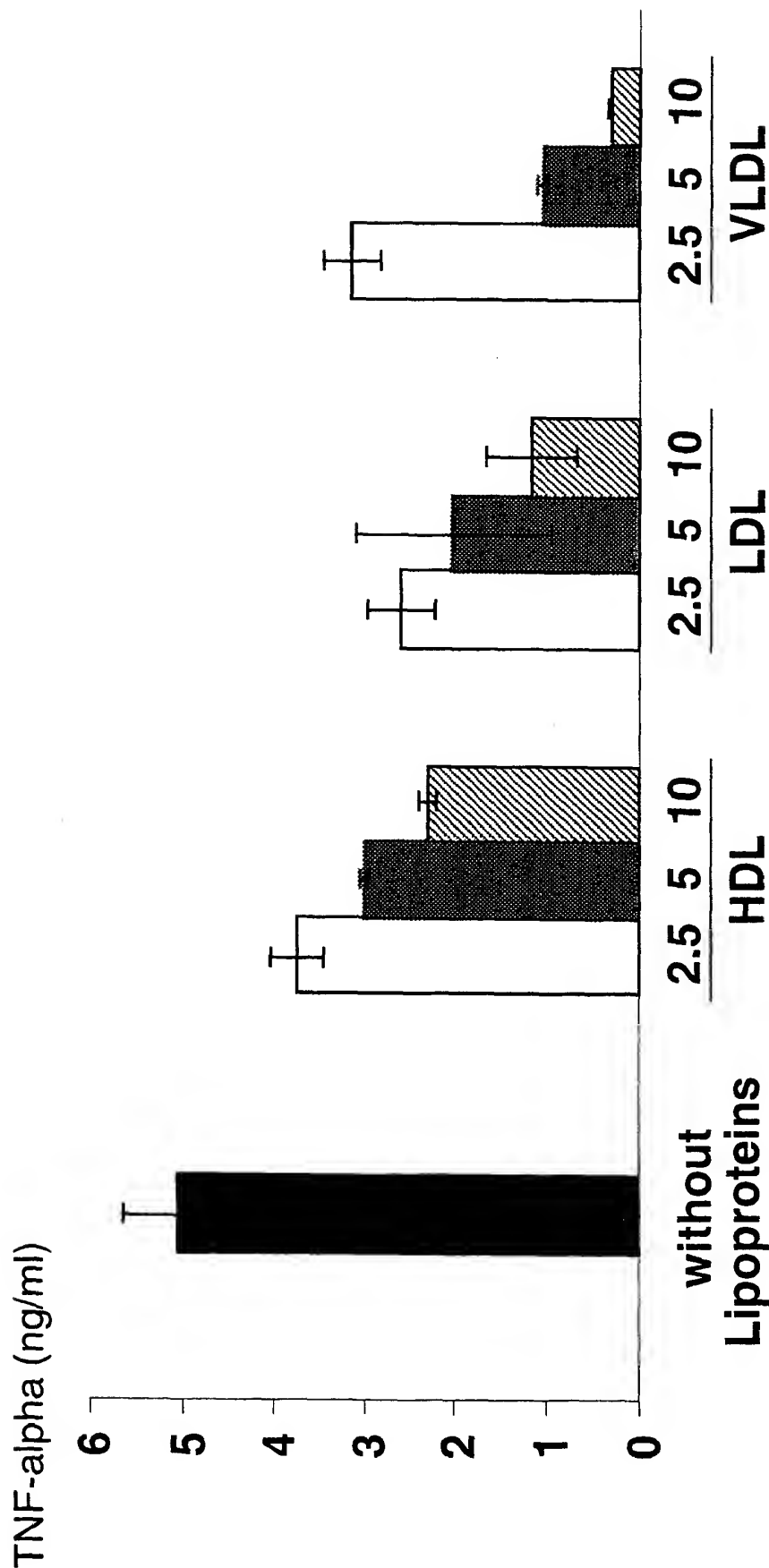
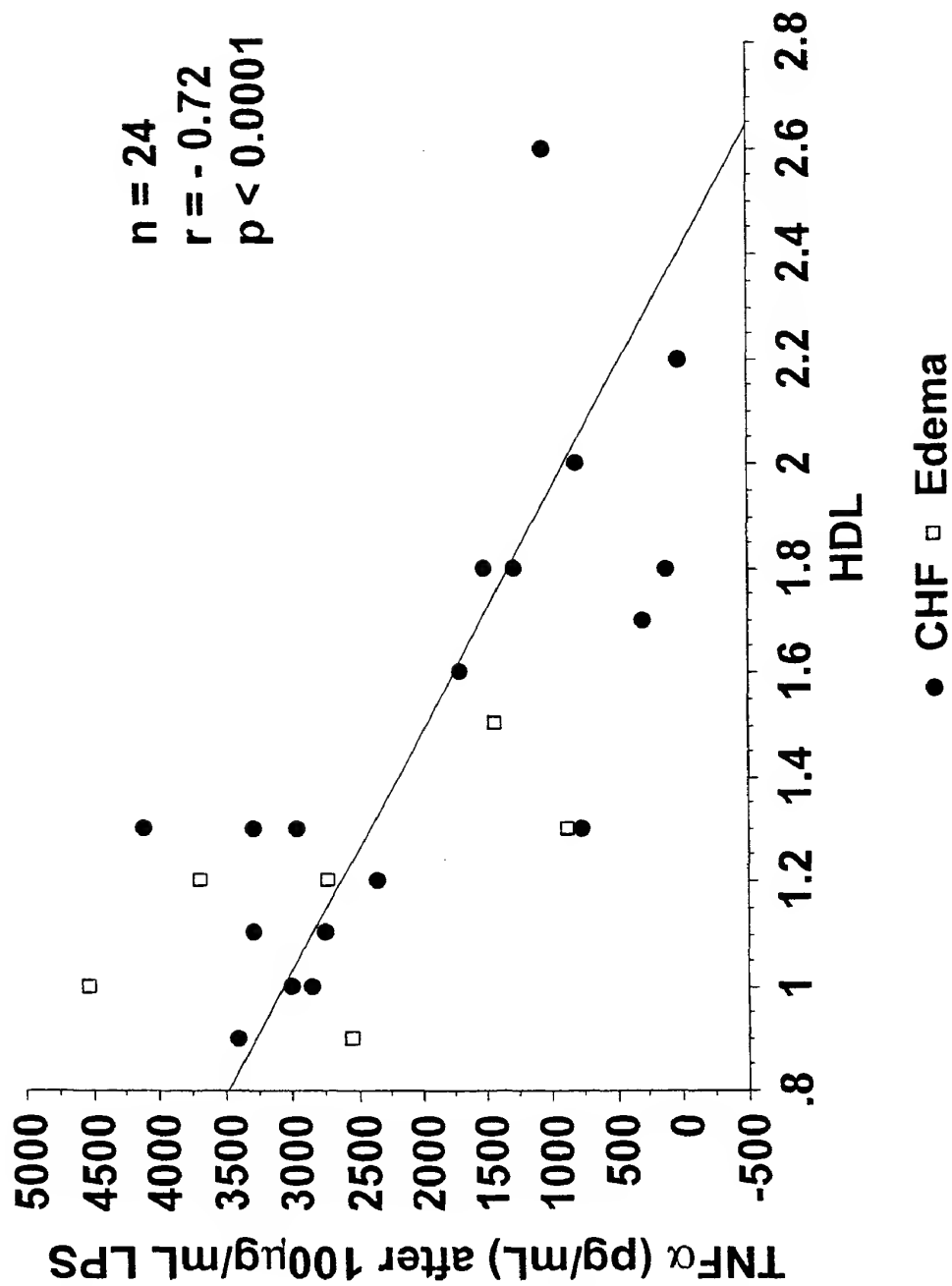


Figure 4: Lipoproteins including HDL, LDL and VLDL inhibit LPS-induced TNF-release of monocytes. The effects of LDL and VLDL are even stronger than that of HDL. In all experiments: n=3
 Lipoproteins were added to Lipoprotein-free Serum (5 %) and incubated for 17 h with 3 ng/ml LPS before addition to monocytes



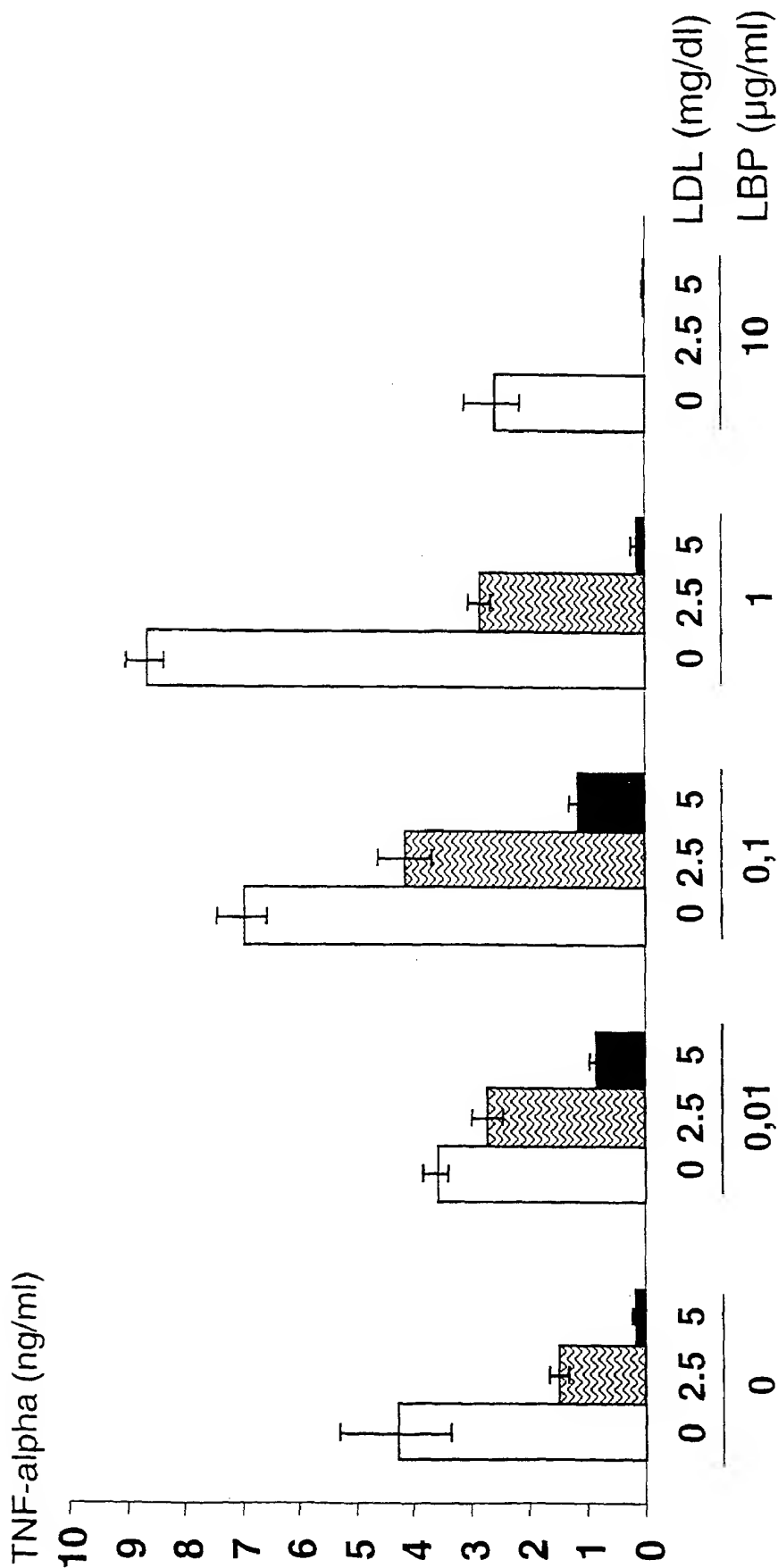


Figure 6: In the presence of elevated LBP-concentrations lipoproteins show enhanced LPS-neutralization capacity. In all experiments: n=3.

LBP and LDL were pre-incubated for 17 h before cell stimulation with 3 ng/ml LPS

TNF-alpha (ng/ml)

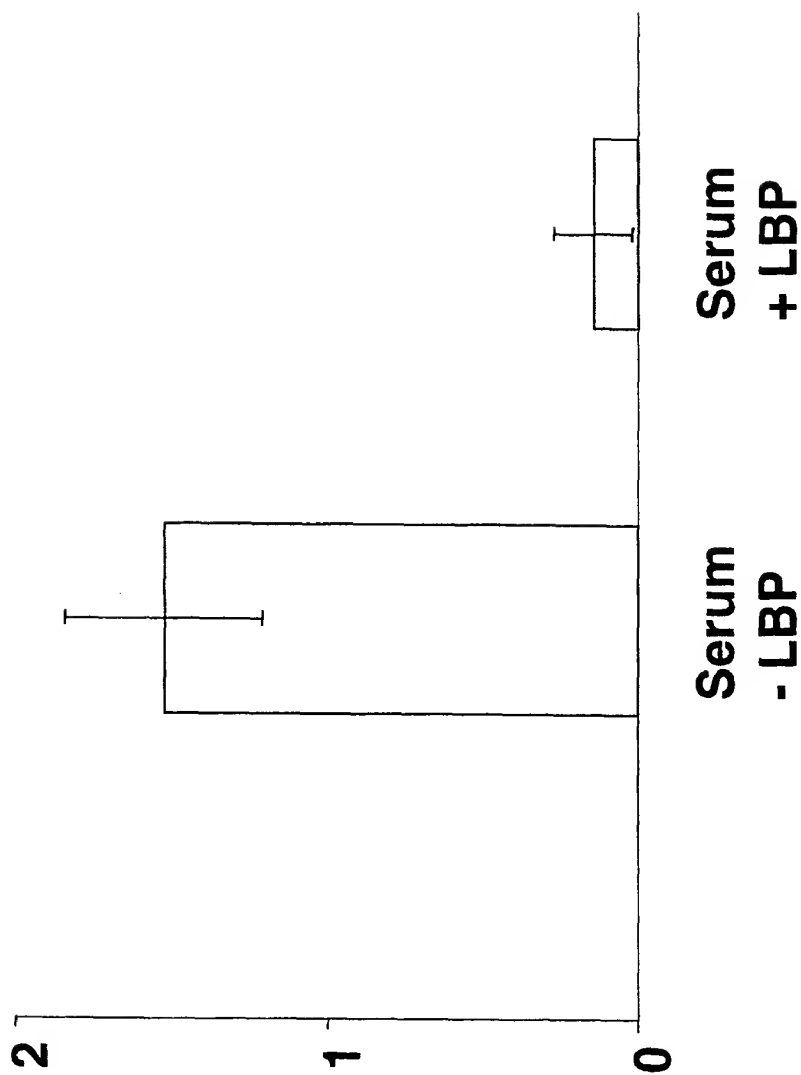


Figure 7: Addition of LBP to lipoprotein containing serum reduces LPS-mediated TNF production (n=3).

Normal serum +/- 10 µg/ml LBP was incubated with 3 ng/ml LPS for 16 h, and then added to monocytes

Figure 8: LPS - Neutralisation by UDCA in whole blood of 4 healthy subjects

	Control D			Control J			Control Ch			Control F		
	TNF		IL6	TNF α		IL6	TNF α		IL6	TNF α		IL6
	pg/ml			pg/ml			pg/ml			pg/ml		
Measurements by Immulite												
Control, blood alone (Con)	6.7	<5	<5	4.6	<5	<5	14	8	15.4	<5	<5	<5
Con + 50 pg/ml LPS	294	301	380	456	380	300	486	300	589	487	487	487
Con + BPI (1 μ g/ml)	<4	<5	<5	6.9	<5	<5	6.9	<5	8	<5	<5	<5
Blood with UDCA 1 mg/ml (1% ethanol)	4.8	<5	<5	6	6.5	8.5	<4	8.5	<4	<5	<5	<5
+ LPS + UDCA	<4	5.6	<5	<4	<5	9.1	6.4	9.1	<4	<5	<5	<5
+ LPS + Ethanol 1% (no UDCA)	126	119	286	315	286	318	407	318	430	408	408	408
Blood with UDCA 100 μ g/ml (0.1% ethanol)	10.6	<5	<5	14	<5	46.3	42.7	46.3	16	<5	<5	<5
+ LPS + UDCA	114	114	20.4	41.3	20.4	306	49.6	306	397	419	419	419
+ LPS + Ethanol 0.1% (no UDCA)	265	230	263	221	263	375	599	375	569	414	414	414
Blood with UDCA 10 μ g/ml (0.01% ethanol)	8.5	<5	<5	8.3	<5	9	13.7	9	12.3	<5	<5	<5
+ LPS	279	248	358	432	358	400	617	400	600	499	499	499

Figure 9: LPS - Neutralisation by UDCA in whole blood in patient 1

Measurements by Immulite	P1 / -1			P1 / 0			P1 / 1			P1 / 2			P1 / 5		
	TNF	IL6	pg/ml	TNFα	IL6	pg/ml	TNFα	IL6	pg/ml	TNFα	IL6	pg/ml	TNFα	IL6	pg/ml
Control, blood alone (Con) Con + 50 pg/ml LPS Con + BPI (1µg/ml)	28.7	11.2		70.2	35.2										
	878	573		938	723										
	29.7	< 5		15.1	< 5										
Blood with UDCA 1 mg/ml (1% ethanol) + LPS + UDCA + LPS + Ethanol 1% (no UDCA)	< 4	12.8		10.	9.8										
	< 4	10.7		6.4	6.0										
				648	278										
Blood with UDCA 100µg/ml (0.1% ethanol) + LPS + UDCA + LPS + Ethanol 0.1% (no UDCA)	8.5	7.8		24.5	19.7										
	813	153		692	773										
				886	580										
Blood with UDCA 10 µg/ml (0.01% ethanol) + LPS	38.0	11.4		93.0	45.7										
	952	597		1013	853										
Plasma levels				9.1	26.7		8.3	28.8		< 4	20.5		5.8	28.1	

Figure 10: LPS - Neutralisation by UDCA in whole blood in patient 2

Measurements by Immulite	P2 / -1		P2 / 0	
	TNF α	IL6	TNF α	IL6
	pg/ml		pg/ml	
Control, blood alone (Con)	29.0	10.5	47.5	25.6
Con + 50 pg/ml LPS	731	544	807	587
Con + BPI (1 μ g/ml)	17.0	<5	9.8	<5
Blood with UDCA 1 mg/ml (1% ethanol)	<4	10.1	<4	7.8
+ LPS + UDCA	9.7	<5	<4	5.4
+ LPS + Ethanol 1% (no UDCA)	569	419	540	405
Blood with UDCA 100 μ g/ml (0.1% ethanol)	14.6	7.0	35.2	19.5
+ LPS + UDCA	271	343	459	391
+ LPS + Ethanol 0.1% (no UDCA)	712	546	993	788
Blood with UDCA 10 μ g/ml (0.01% ethanol)	42.4	26.2	54.1	32.0
+ LPS	712	622	744	532
Plasma levels	4.9	6.6	<4	7.6

Figure 11: LPS - Neutralisation by UDCA in whole blood in patient 3

	P3 / -1			P3 / 0		
Measurements by Immulite	TNF α	IL6	pg/ml	TNF α	IL6	pg/ml
Control, blood alone (Con)	43.1	7.9		52.1	12.9	
Con + 50 pg/ml LPS	450	378		490	346	
Con + BPI (1 μ g/ml)	16.4	< 5		10.0	< 5	
Blood with UDCA 1 mg/ml (1% ethanol)	6.5	10.4		< 4	9.1	
+ LPS + UDCA	< 4	10.3		< 4	10.7	
+ LPS + Ethanol 1% (no UDCA)	208	108		288	169	
Blood with UDCA 100 μ g/ml (0.1% ethanol)	12.1	9.4		21.7	8.4	
+ LPS + UDCA	48.0	63.5		241	382	
+ LPS + Ethanol 0.1% (no UDCA)	383	285		448	346	
Blood with UDCA 10 μ g/ml (0.01% ethanol)	34.7	8.0		39.4	10.7	
+ LPS	375	310		468	366	
Plasma level	13.0	17.1		10.2	15.9	

Figure 12: LPS - Neutralisation by UDCA in whole blood in patient 4

Measurements by Immulite	P4 / -1			P4 / 0			P4 / 1			P4 / 2		
	TNF α	IL6	pg/ml	TNF α	IL6	pg/ml	TNF α	IL6	pg/ml	TNF α	IL6	pg/ml
Control, blood alone (Con)	34.5	10.4		29.5	10.2		4.7	<5		4.0	<5	
Con + 50 pg/ml LPS	224	98.4		172.0	77.5		156	88.9		100	46.8	
Con + BPI (1 μ g/ml)	18.1	<5		33.5	7.1		<4	<5		<4	<5	
Blood with UDCA 1 mg/ml (1% ethanol)	<4	8.2		<4	8.2		<4	<5		<4	8.8	
+ LPS + UDCA	<4	6.6		<4	9.5		<4	5.6		<4	6.3	
+ LPS + Ethanol 1% (no UDCA)	132	48.0		98.5	68.4		66.9	35.6		49.5	26.5	
Blood with UDCA 100 μ g/ml (0.1% ethanol)	83.7	49.6		44.5	60.0		4.2	<5		<4	<5	
+ LPS + UDCA	242	257		55.8	61.0		89.7	36.6		39.9	34.6	
+ LPS + Ethanol 0.1% (no UDCA)	154	130		136.0	159		141	82.7		120	81.0	
Blood with UDCA 10 μ g/ml (0.01% ethanol)	42.3	13.6		174	72.0		10.9	<5		5.2	<5	
+ LPS	188	80.2		278	166		163	88.7		95.6	53.4	
Plasma levels	8.1	<5		<4	<5		<4	<5		4.7	<5	